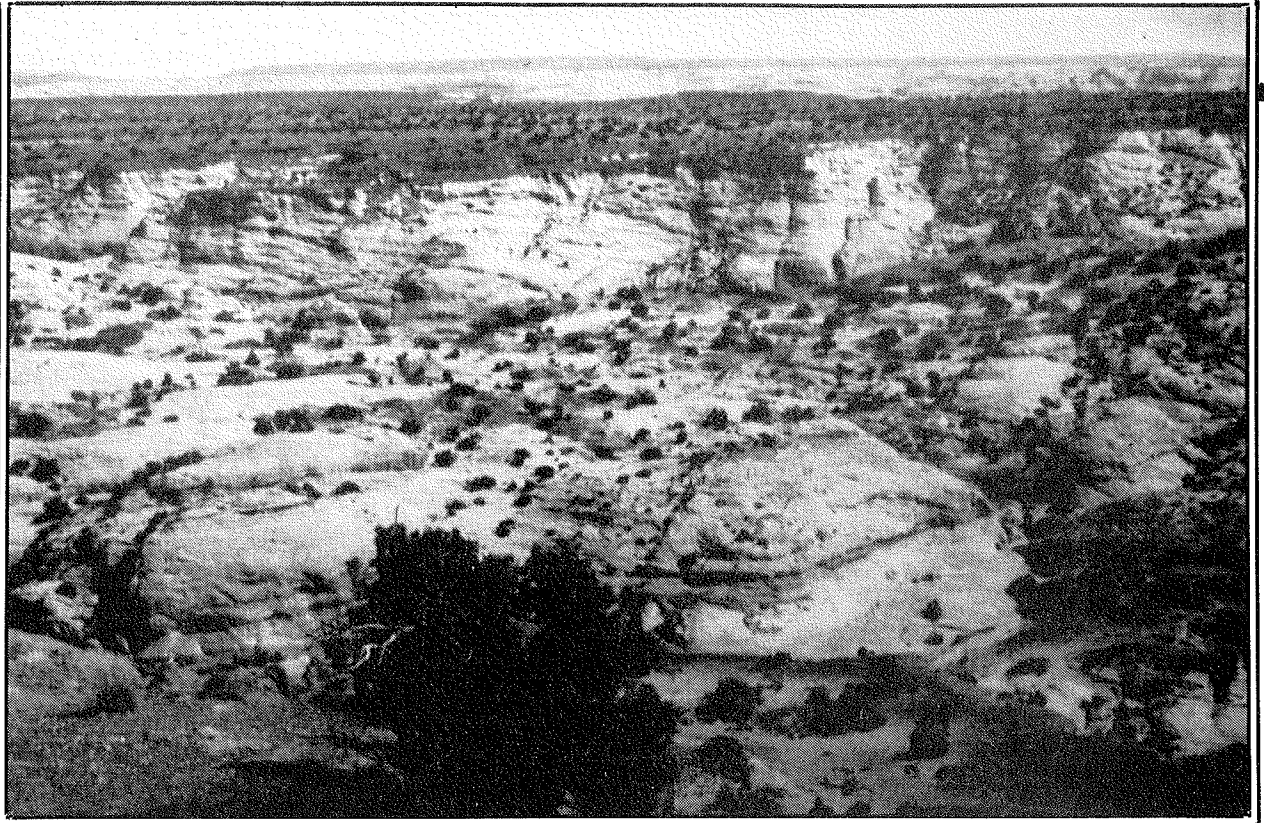
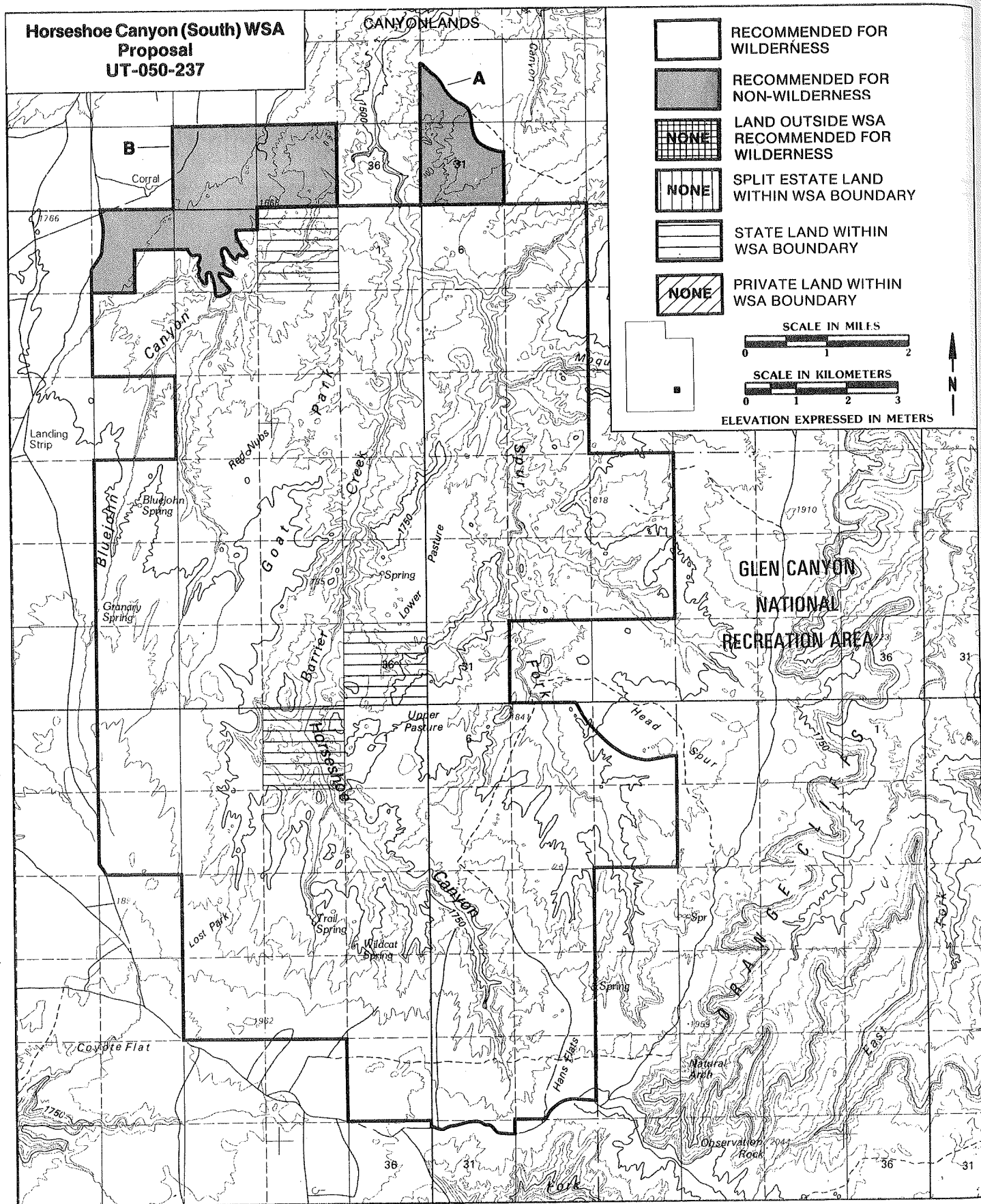


# Horseshoe Canyon (South) WSA



# HORSESHOE CANYON (SOUTH) WSA



# **HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA**

## **1. THE STUDY AREA: 38,800 acres**

The Horseshoe Canyon (South) Wilderness Study Area (WSA) (UT-050-237) is in northeastern Wayne County, about 24 miles east of Hanksville, Utah. The unit is about 12 miles long, from north to south, and 7 miles wide, east to west. The WSA is contiguous with the Glen Canyon National Recreation Area (GCNRA) for about 10 miles on the east. Approximately 3 miles of the southern boundary is contiguous with the French Spring-Happy Canyon WSA (UT-050-236B). The western and northern boundaries of the WSA are defined by section lines and short road segments (see Map). The WSA contains 38,800 acres of public land administered by the Bureau of Land Management (BLM).

Three State sections (1,922 acres) are inheld in the WSA and are in the portion recommended for wilderness designation (see Table 1).

Three canyons tributary to Horseshoe Canyon are in the WSA. The canyons are from a few feet to 0.5 mile wide; are as much as 600 feet deep; and are characterized by a wide range of colors, sheer walls, and many large overhangs. The canyons converge in the northern portion of the WSA to form Horseshoe Canyon. Weathered sandstone benches, covered in places by grassy parks, separate the canyons. Buttes, domes, and sand dunes are also found in the WSA. Elevations in the study area range from 5,800 feet to 6,200 feet.

**TABLE 1  
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA<sup>a</sup>**

<b>WITHIN THE WSA</b>	<b>ACRES</b>
BLM (surface and subsurface)	38,800
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	1,922
<b>Total</b>	<b>40,722</b>
<b>WITHIN THE RECOMMENDED WILDERNESS BOUNDARY</b>	
BLM (within the WSA)	36,000
BLM (outside the WSA)	0
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
<b>Total BLM land recommended for wilderness</b>	<b>36,000</b>
In-holdings (State, private)	1,922
<b>WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS</b>	
BLM	2,800
Split-Estate	0
<b>Total BLM land not recommended for wilderness</b>	<b>2,800</b>
In-holdings (State, Private)	0

Source: BLM File Data

<sup>a</sup> The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

## HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

Pinyon-juniper, desert grass, and black-brush are the dominant vegetative types, but about a third of the total surface area is bare rock or sand.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Four alternatives were analyzed in the EIS: a partial wilderness alternative where 36,000 acres would be designated as wilderness and the remaining 2,800 acres would be released for uses other than wilderness, which is the recommendation in this report; a no action (no wilderness) alternative; an all wilderness alternative; and a smaller partial wilderness alternative where 28,700 acres would be designated as wilderness.

### 2. RECOMMENDATION AND RATIONALE:

- 36,000 acres  
(recommended for wilderness)
- 2,800 acres  
(not recommended for wilderness)

The recommendation for this WSA is to designate 36,000 acres as wilderness and to release the remaining 2,800 acres for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize adverse environmental impacts. The Appendix lists all in-holdings and split-estate tracts and provides additional information on acquisition of in-holdings and split-estate minerals.

All of the recommended portion is in a natural condition and has outstanding opportunities for solitude. About 79 percent has outstanding opportunities for primitive recreation.

Most of the WSA is in a natural condition. Horseshoe Canyon is a tangle of colorful entrenched canyons, bowls, alcoves, buttes, domes, sand dunes, pot-holes, pour-offs, plunge pools, and mesas. The WSA contains the headwaters of three ephemeral creeks (Barrier,

Bluejohn, and Spur Creeks). The canyons reach depths of up to 600 feet and are characterized by a wide range of colors and sheer rock faces. The central portion is also characterized by grassy parks and large expanses of slickrock. Portions along the south and southeast boundary, above the canyons, have rolling hills with pinyon trees, shrubs and grasses.

The majority (2,500 acres) in Areas A and B of the WSA not recommended for wilderness designation lack outstanding opportunities for solitude as well as primitive and unconfined recreation. Part of Area A is adjacent to heavily used dirt roads and corrals.

### 3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

#### Wilderness Characteristics

##### A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

Human intrusions, all of which are judged to be substantially unnoticeable, consist of 2 miles of fence, three corrals, one livestock reservoir, two drill sites, six improved springs, and 23 miles of ways in various stages of natural rehabilitation.

##### B. Solitude

Opportunities for solitude on 36,300 acres are outstanding in terms of the standards set by the Wilderness Act. The opportunities on the remaining 2,500 acres, all in the northern portion of the WSA, are considered as less than outstanding due to the lack of screening by terrain and vegetation.

The numerous steep-walled, winding canyons provide screening that substantially contributes to opportunities for solitude. Scattered clusters of pinyon-juniper vegetation on the mesas above the canyons screen visitors from each other on the periphery of the WSA. No sights and sounds occur outside the WSA

## HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

to adversely affect opportunities for solitude. The large size of the area also contributes to spatial screening.

### C. Primitive and Unconfined Recreation

Overall, the WSA offers outstanding opportunities for a variety of primitive and unconfined types of recreation that meet the standards set by the Wilderness Act on approximately 28,400 acres. Opportunities on the remaining 10,400 acres are less than outstanding due to the absence of recreational features.

The WSA has opportunities for 11 recreational activities. Because of the numerous potential campsites, rugged and colorful canyons, caves, slickrock areas, contrasting vegetation types, springs, and numerous archaeological sites, seven opportunities were rated outstanding. These include backpacking; camping; horseback riding; photography; and archaeological, geological, and scenic sightseeing.

Opportunities for primitive recreation are less exceptional in the rolling pinyon-juniper vegetated portions along the southern and southwestern margins of the WSA.

### D. Special Features

Approximately 94 percent (36,500 acres) of the WSA is rated outstanding for scenic quality.

Cowboy Cave, an archaeological site near Spur Fork Canyon, contains some of the richest and oldest paleontological remains in the State of Utah. Underlying the cultural remains in the cave is a fairly heavy dung deposit left by mammoth, bison, horse, camel, and sloth. The mammoth is further represented by the tips of two juvenile tusks. The dung was radiocarbon dated to between 11,000 and 13,000 years ago (9,000 to 11,000 B.C.).

The WSA was frequented by Butch Cassidy and the Wild Bunch. Several cabins used by the outlaws are on the edge of the WSA. The diversity and uniqueness of these features enhance the other wilderness values of the WSA.

Desert bighorn sheep, which is a species associated with wilderness, and wild burros may inhabit the WSA.

The endangered peregrine falcon and black-footed ferret may occur in the WSA. Six other U.S. Fish and Wildlife Service (FWS) candidate threatened or endangered animal species may also inhabit or visit the WSA. Refer to Appendix 4 and the Affected Environment, Wildlife Including Special Status Species section of the Utah BLM Statewide Wilderness Final EIS for additional information.

### Diversity in the National Wilderness Preservation System (NWPS)

#### A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS. PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is juniper-pinyon woodland (10,860 acres) and galleta-threeawn shrubsteppe (27,940 acres).

The juniper-pinyon PNV in the WSA is represented in the NWPS nationally and in Utah and in other BLM study areas both in and outside of Utah. The galleta-threeawn shrubsteppe PNV is not now represented in the NWPS, however. This information is summarized in Table 2 from data compiled in December 1989.

#### B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas. Table 3 summarizes the number and acreage of designated wilderness and other BLM study areas within a 5-hour drive of these population centers.

# **HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA**

**TABLE 2  
ECOSYSTEM REPRESENTATION**

BAILEY-KUCHLER CLASSIFICATION (PNV)	NWPS AREAS		OTHER BLM STUDIES	
	AREAS	ACRES	AREAS	ACRES
<b>NATIONWIDE (COLORADO PLATEAU PROVINCE)</b>				
Juniper-Pinyon Woodland	11	1,401,475	84	2,133,145
Galleta-Threeawn Shrubsteppe	0	0	10	162,786
<b>UTAH (COLORADO PLATEAU PROVINCE)</b>				
Juniper-Pinyon Woodland	1	26,000	53	1,695,338
Galleta-Threeawn Shrubsteppe	0	0	10	162,786

Source: BLM File Data.

**TABLE 3  
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS**

POPULATION CENTERS	NWPS AREAS		OTHER BLM STUDIES	
	AREAS	ACRES	AREAS	ACRES
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,220,875
Provo-Orem, Utah	11	721,793	90	2,761,868

Source: BLM File Data.

## **C. Balancing the Geographic Distribution of Wilderness Areas**

The Horseshoe Canyon (South) WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS. As of January, 1987, the NWPS included 93 areas comprising 5,475,207-acres in Utah and Arizona and Colorado, the adjacent states nearest the WSA.

A Horseshoe Canyon (South) Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau, however, where there are just two established wildernesses, totaling 70,751 acres. There are two designated wilderness areas within 100 miles of the WSA. To the southeast is the 45,000-acre Dark Canyon Wilderness, and to the southwest is the 25,751-acre Box-Death Hollow Wilderness. Both are administered by the U.S. Forest Service (FS).

**Manageability** (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA, including the portion recommended for wilderness designation can be managed to preserve wilderness values now in the area. Current uses such as livestock grazing and maintenance of rangeland development such as fences, a livestock reservoir, corrals and spring developments, would continue with little or no effect on wilderness values.

Even though there are 320 acres in a post-FLPMA oil and gas lease in the WSA, the lease is subject to nonimpairment of wilderness values and it is expected that it will expire and not be renewed.

There are no known deposits of locatable minerals and there are presently no mining claims in the WSA.



## HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

There are no private in-holdings, rights-of-way, or subsurface rights within the WSA. The presence of three State sections (1,922 acres) scattered through the wilderness could create manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. One of the State sections (642 acres) is leased for oil, gas and hydrocarbons. It is projected that eventually about 15 acres of the recommended wilderness would be disturbed to provide access to State lands. Additionally, any developments on State in-holdings could reduce wilderness values in parts of the recommended wilderness. The probability of major developments on State lands is low.

### Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) examined the WSA for mineral and energy resource potential and prepared a report and map (USGS Miscellaneous Field Studies Map MF 1754-A, R. F. Dubiel, et al., 1985). The report indicates that the WSA has a moderate potential for oil and gas. The potential for tar sand resources is unknown. The study area appears to have moderate potential for undiscovered uranium resources. The potential is low for metals other than uranium, however.

The WSA has some potential for materials that could be used for construction purposes. Sand and gravel are present in terrace deposits and could be sources of building stone. Larger and more accessible deposits of the same kind of materials are available outside the WSA, closer to markets, however.

### Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

### Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

### Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 54 inputs specifically addressing this WSA were received from 291 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 272 commenters supported wilderness designation for part or all of the WSA, while 13 commenters were opposed. Six commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that wilderness designation of the WSA would preserve the area for future generations and protect wilderness values from development. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness designation would harm local and State economies and doubted that the WSA is of an adequate size to be established as a wilderness. Most of those opposing wilderness designation were almost equally from rural Utah and from other states.

Three Federal agencies, the National Park Service (NPS), the Environmental Protection Agency (EPA), and the USBM commented on the Draft EIS. The NPS supported the all wilderness alternative and stated that the EIS should include a more complete discussion of how boundaries were determined, and an evaluation of State lands on boundaries for possible acquisition and inclusion in the wilderness proposal. They also questioned BLM's rating of traffic in the vicinity of the WSA. Both the NPS and

## HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

EPA commented that the analysis of impacts associated with tar sand development should be expanded.

The USBM did not take a position on wilderness designation for the WSA, but stated that the BLM had underestimated the petroleum potential of the WSA.

No comment letters were received on the Final EIS.

There are three State sections (1,922 acres) of State land in the WSA. In commenting on the Draft EIS, the State of Utah commented that the Draft EIS lacked sufficient geologic information to predict economic potential of mineral resources. According to the State, the Horseshoe Canyon (South) WSA ranks high for wilderness values and moderate to high for conflicts in comparison with other WSAs in the region. Reported conflicts would be with base water rights, livestock grazing, and uranium potential in the southern half of the WSA. The State noted that conflicts may be eliminated with boundary adjustments.

The WSA is entirely within Wayne County. The Wayne County Master Planning Report does not identify recommendations at specific locations. The plan recognizes that "... outstanding natural landmarks should be preserved as much as possible." However, it also states that "Open spaces should be used for many purposes rather than strictly as wilderness areas." The Wayne County Commission is opposed to wilderness designation for this WSA because in their opinion the WSA has extensive uranium, silver, gold, and tar sand deposits and moderate to moderately high reserves of oil and gas potential. The County Commission also has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah.



# HORSESHOE CANYON (SOUTH) WSA

Table 4  
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives		
	Recommendation Large Partial Wilderness (36,000 Acres)	No Action/No Wilderness (38,800 Acres)	Small Partial Wilderness (28,700 Acres)
Impacts on Wilderness Values	<p>Wilderness values would be preserved overall in the designated area which is approximately 93 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 15 acres because of construction of access roads to State in-held lands and would be indirectly reduced in quality on up to 2,328 acres of the WSA. Special features would be preserved with the exception that Class A scenery would be reduced in quality in the nondesignated portion would detract from opportunities for solitude and primitive recreation in the WSA.</p>	<p>Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 38 acres because of mineral exploration and development, construction of access roads to State in-held lands, and rangeland projects, and would be indirectly reduced in quality on up to an additional 5,820 acres of the WSA. Special features would not be significantly affected except for Class A scenery which would be reduced in quality in the disturbed areas. Use of ways and new mineral exploration roads would detract from opportunities for solitude and primitive recreation in the WSA. This alternative would not complement or enhance the NPS proposal for wilderness designation of NPS lands.</p>	<p>Wilderness values would be preserved in the designated area which is approximately 74 percent of the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 15 acres because of construction of access roads to State in-held lands and would be indirectly reduced in quality on up to 2,328 acres. Most of the impact would be in the designated area. Special features would be preserved with the exception that Class A scenery would be reduced in quality in the disturbed areas. Use of 11 miles of ways in the non-designated portion would detract from opportunities for solitude and primitive recreation. This alternative would not complement or enhance the NPS proposal for wilderness designation for NPS lands.</p>

# HORSESHOE CANYON (SOUTH) WSA

Table 4 (Continued)  
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives			
	Recommendation Large Partial Wilderness (36,000 Acres)	No Action/No Wilderness	All Wilderness (38,800 Acres)	Small Partial Wilderness (28,700 Acres)
Impacts on Mineral and Energy Exploration and Production	<p>Opportunities for oil and gas exploration would be foregone. There likely would not be a significant loss in recovery of oil and gas or other mineral and energy resources.</p>	<p>This alternative would not adversely affect oil and gas or other mineral exploration or production because leasing, location of claims, and development activities would continue without wilderness restrictions.</p>	<p>Opportunities for oil and gas exploration would be foregone. There likely would not be a significant loss in recovery of oil and gas or other mineral and energy resources.</p>	<p>Opportunities for oil and gas exploration would be foregone. There likely would not be a significant loss in recovery of oil and gas or other mineral and energy resources.</p>
Impacts on Livestock Management	<p>This alternative would result in restrictions on access to about 8 miles of ways in the WSA that are used for livestock management, project maintenance, and access to three corrals. Three proposed reservoirs may not be built. This alternative would result in increased costs and inconvenience for three permittees.</p>	<p>Livestock management would not be affected by this alternative because methods of access, maintenance, and development of rangeland projects would continue as at present.</p>	<p>Wilderness designation would result in restrictions on access to about 10 miles of ways that are used for livestock management, project maintenance, and access to three corrals. Three proposed reservoirs may not be built. Wilderness designation would result in inconvenience and an increase in costs for management by three permittees.</p>	<p>This alternative would result in restrictions on access to about 3 miles of ways that are used for livestock management, project maintenance, and access to one corral. Three proposed reservoirs may not be built. There would be very slight increases in cost for management by one permittee.</p>

# HORSESHOE CANYON (SOUTH) WILDERNESS STUDY AREA

Appendix  
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation <sup>a</sup>

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate) (Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	Estimated Cost of Acquisition (Processing Costs)
T. 28 S., R. 15 E., Sec. 2	641.96		State	No	Exchange		\$2,000
T. 28 S., R. 15 E., Sec. 36	640.00		State	No	Exchange		\$2,000
T. 29 S., R. 15 E., Sec. 2	640.28		State	No	Exchange		\$2,000

<sup>a</sup> The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.